



DEPARTMENT OF THE NAVY

NAVAL AIR SYSTEMS COMMAND  
NAVAL AIR SYSTEMS COMMAND HEADQUARTERS  
WASHINGTON, DC 20361

IN REPLY REFER TO

NAVAIRINST 5400.108

AIR-07

19 July 1983

NAVAIR INSTRUCTION 5400.108

From: Commander, Naval Air Systems Command

Subj: Program/functional matrix management within the Naval Air Systems Command

Ref: (a) NAVAIRINST 5000.8A, Systems Acquisition Management in the Naval Air Systems Command  
(b) NAVAIRINST 5400.1B, Naval Air Systems Command Headquarters Organization Manual  
(c) NAVMATINST 5450.27B, CNM Commanded Research and Development Centers; missions and functions of  
(d) NAVAIRINST 5451.67B, Policy on Exercise of Command and Support Responsibilities for Field Activities of the Naval Air Systems Command  
(e) NAVAIRINST 5451.87, Technical Support Assignments to NAVAIR Field Activities and NAVMAT R&D Centers  
(f) NAVAIRINST 5400.14C, The Cognizant Field Activity Program  
(g) NAVAIRINST 5220.13C, Resource Planning  
(h) NAVAIRINST 3900.8A, AIRTASK and Work Unit Assignments to Field Activities

1. Purpose. To establish command policies and general operating procedures for execution of program management within the framework of the program/functional matrix organization in the Naval Air Systems Command (NAVAIRSYSCOM)--the headquarters (HQ) and field activities. Additionally, it establishes complementing policies for management of decentralized technical support of NAVAIRSYSCOM projects and programs at the NAVAIRSYSCOM field activities, other field activities, and the Naval Material Command (NAVMAT) research and development (R&D) centers.

2. Scope. The provisions of this instruction apply to all NAVAIRSYSCOM program management and program coordination operations and related support efforts, including technology base programs. These provisions also apply to management of the utilization of NAVAIRSYSCOM field activities and the NAVMAT R&D centers for technical support of all NAVAIRSYSCOM programs. Since contractor support services (CSS), when required, must be managed and controlled as a subset within the overall NAVAIRSYSCOM program framework, the principles prescribed herein also apply to the use of CSS.

3. Background. A fundamental Department of Defense policy is that the acquisition of major weapon systems will be directed by a specifically responsible manager under the concept of program management. This concept requires that the responsible program manager will have centralized authority, responsibility and accountability for all aspects of a designated program. The essence of the program manager's role is to act as the agent of the service in management of the weapon system acquisition process. Accordingly, the program manager is the authoritative representative of the developing agency, NAVAIRSYSCOM for naval aeronautical weapon systems, in the execution of this role within a chartered responsibility and approved constraints and thresholds.

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a. Program management can be implemented using a variety of organizational and procedural alignments which permit intensified direction of the overall weapon systems acquisition process. In NAVAIRSYSCOM a program/functional matrix management mode of operation is utilized. In the NAVAIRSYSCOM program/functional matrix organization, the program manager exercises centralized program authority with a relatively small program office staff. This office is served by the various "functional divisions", within the "functional groups" (e.g., Logistics/Fleet Support (AIR-04), Systems and Engineering (AIR-05), Test and Evaluation (AIR-06)), which are responsible for execution of assigned functional (technical) roles and tasks. While the program manager has the authority, responsibility and accountability for the program, he/she does not have the total control of all of the management resources under this organizational alignment. The program manager exercises the program authority and the various supporting "functional managers" within the functional groups (functional division directors) exercise functional (technical) authority (i.e., control of the functional resources and technical tools). Therefore, the program manager is dependent upon the functional components (functional manager/specialists and technical support activities) for the full range of technical management and technical support and the fulfillment of the program's objectives. Accordingly, one of the primary roles of the program manager, AIR (PMA), is to coordinate and integrate the individual subprogram elements of the functional components into a unified program without breaching performance (including operational readiness), cost, or schedule thresholds. The effectiveness of the PMA, under these organizational and procedural alignments is dependent, to a significant degree, on the leadership that he/she exercises through the fostering of teamwork among the various functional managers and their functional specialists (within the functional divisions (e.g. Logistics Management Division (AIR-410), Systems Engineering Management Division (AIR-511), Test and Evaluation Projects Division (AIR-620)).

b. In principle, the functional specialists, within the functional divisions, have memberships in two organizational entities — one in the functional (specialty) division and the other in the single purpose program team. The program team is an interdisciplinary task oriented array of personnel with a myriad of skills and professions. The functional groups' program support teams (e.g., the Integrated Logistic Support Management Team in AIR-04, the program Support Officers Team in AIR-05 and the T&E Resource Management Team in AIR-06) are coordinated by the designated assistant program managers (APM's) in each of the functional groups. These APM's act as the focal points for program matters within the functional groups. Conversely, the APM's act as the principal liaison representatives of the functional groups with the PMA. The PMA and the program office staff effect the coordination and integration of the subprogram elements (program team's supporting efforts) discussed above, via the APM's. Reference (a) provides detailed NAVAIRSYSCOM policy and procedures applicable to the management of this process. The specific roles and responsibilities of the functional groups/divisions are outlined in reference (b). The Office of Counsel (AIR-00C) provides legal services in business and commercial law to the PMA's and the functional groups.

c. NAVAIRSYSCOM employs other acquisition management procedures, similar to program management, in the life cycle management of Navy aeronautical weapon systems—program coordination, system program management, and advanced development program coordination. AIR program coordinators (APC's) are designated to provide command-wide management for selected, less-than-major projects which warrant dedicated acquisition management. System program managers (SPM's) are designated for command-wide management of selected commodity area programs (e.g., aviation

support equipment) which require intensified management and centralized direction. APC's and SPM's have authority-accountability-responsibility charters similar to the PMA's. Advanced development program offices (ADPO's) may be designated for selected critical technology base programs for command-wide coordination. In principle, the program management concepts described in the context of the PMA perspective apply to APC's, SPM's and ADPO's in varying degrees depending upon relative Command priorities and program scope. The roles of the APC's, SPM's, and ADPO's are outlined in reference (a).

d. Program/functional matrix relationships are more complex and difficult to manage than traditional relationships within a standard functional organization or pure program organizations. This fact of life places an additional burden upon managers and supervisors at all levels. Furthermore, there is a certain degree of contention inherently built into this organizational structure and program management approach. However, when managed properly, this contention is purposeful and constructive. It promotes synergy by combining the best from a strong program approach and a strong functional/technical approach. The resulting balance between the program orientation of the program office and the technical specialty orientations (e.g., procurement, production, scientific, engineering, logistics) of the functional specialists fosters a synergistic environment in which lessons learned on the program can be applied consistently toward solving problems on many programs. In this environment, the PMA/SPM/APC is the overall integrator and the functional managers act as the adjuvants or facilitators. In those cases in which an ADPO is assigned to manage a technology demonstration program or other significant technology-oriented advanced development program (Research, Development, Test and Evaluation (RDT&E), Category 6.3A), the ADPO has a role similar to the PMA/SPM/APC. However, the PMA/SPM/APC/ADPO always retains the ultimate responsibility and authority for program success. The Deputy Commander for Programs and assistant commanders guarantee that the balance is maintained; additionally, they manage conflict resolution, when necessary.

e. The NAVAIRSYSCOM field activities (e.g., Naval Avionics Center) are decentralized components of NAVAIRSYSCOM which provide technical support to the NAVAIRSYSCOM HQ functional groups/divisions for programs in the areas of engineering, logistics, technology base development, test and evaluation, production and other technical specialties. In some specific cases, field activities provide the full range of functional support, including technical management (i.e., in those cases in which formal functional transfers are implemented). Additionally, technical support (primarily in technology base development and system development) is provided by the NAVMAT R&D centers which are under the direct administrative command of the Chief of Naval Material (CHNAVMAT). The NAVMAT R&D centers are administratively controlled by the Office of the Deputy CHNAVMAT for Laboratories (MAT-05) in accordance with reference (c). Reference (c) outlines the general functions and responsibilities of these R&D centers. Reference (d) establishes general policy on the exercise of command and support responsibilities for the NAVAIRSYSCOM field activities. The technical support provided by the NAVAIRSYSCOM field activities and the NAVMAT R&D centers is a major factor in ensuring that NAVAIRSYSCOM consistently acquires operational equipment for the fleet which results in the cost-effective and practical achievement of the defined operational requirements and mission needs (i.e., maintains a "smart-acquirer" posture).

(1) A fundamental prerequisite for effective integration of the field activities and relevant R&D centers in the NAVAIRSYSCOM corporate processes is the formal promulgation of specific product and functional area assignments for

technical support. These assignments and formal working relationships were defined with regard to NAVAIRSYSCOM field activities and participating R&D centers during the execution of the NAVAIRSYSCOM Field Activity/R&D Center Utilization and Workload Management Improvement Program. The primary objectives of this program are

(a) to specify clear lines of technical management and technical support responsibilities within the NAVAIRSYSCOM corporate structure (including the NAVAIRSYSCOM field activities and the primary supporting R&D centers);

(b) to establish flexible procedures by which the NAVAIRSYSCOM field activities and the principal R&D centers could be effectively managed within a corporate command framework; and

(c) to establish principles of operations that promote consistency among the NAVAIRSYSCOM program managers, functional managers, and technical support agents (field activities and R&D centers) so that all technical support operations are guided by common principles.

(2) Reference (e) implements the results of this management initiative. Specific product and functional area technical support cognizance assignments are presented in reference (e). Additionally, the Field Activity/R&D Center Utilization and Workload Management Improvement Program reaffirmed the utility of the NAVAIRSYSCOM cognizant field activity (CFA) concepts for providing the full range of technical support (functional management (e.g., logistics management) in some cases) for in-service systems. Reference (f) provides specific policy and procedures for management of the CFA process and the related technical support for in-service weapon systems and subsystems.

f. Figure 1 is a simplified graphical illustration of the NAVAIRSYSCOM program/functional matrix management approach reflecting the support concepts outlined above. This is merely a descriptive model to aid in characterizing the general relationships between program management and functional management, as well as the complementary relationships between technical management and technical support from the perspective of NAVAIRSYSCOM HQ operations. Furthermore, this model indicates management relationships and should not be interpreted as a representation of span of control and/or tasking authority.

g. Reference (g) establishes procedures for preparing and presenting comprehensive personnel resource plans. These resource plans reflect all of the personnel resources (organic (headquarters and field activities) as well as inorganic (R&D centers and private sector contractors) budgeted for the accomplishment of the total NAVAIRSYSCOM annual program. References (f) and (h) set forth policies and procedures for assignment of work load to the field activities and R&D centers.

#### 4. Policy

##### a. Acquisition Management

(1) Systems acquisitions under the cognizance of NAVAIRSYSCOM will be managed and executed in accordance with the program/functional matrix management philosophy outlined in reference (a). The designated PMA/SPM/APC and/or other acquisition manager (in those cases in which a PMA/SPM/APC has not been designated)

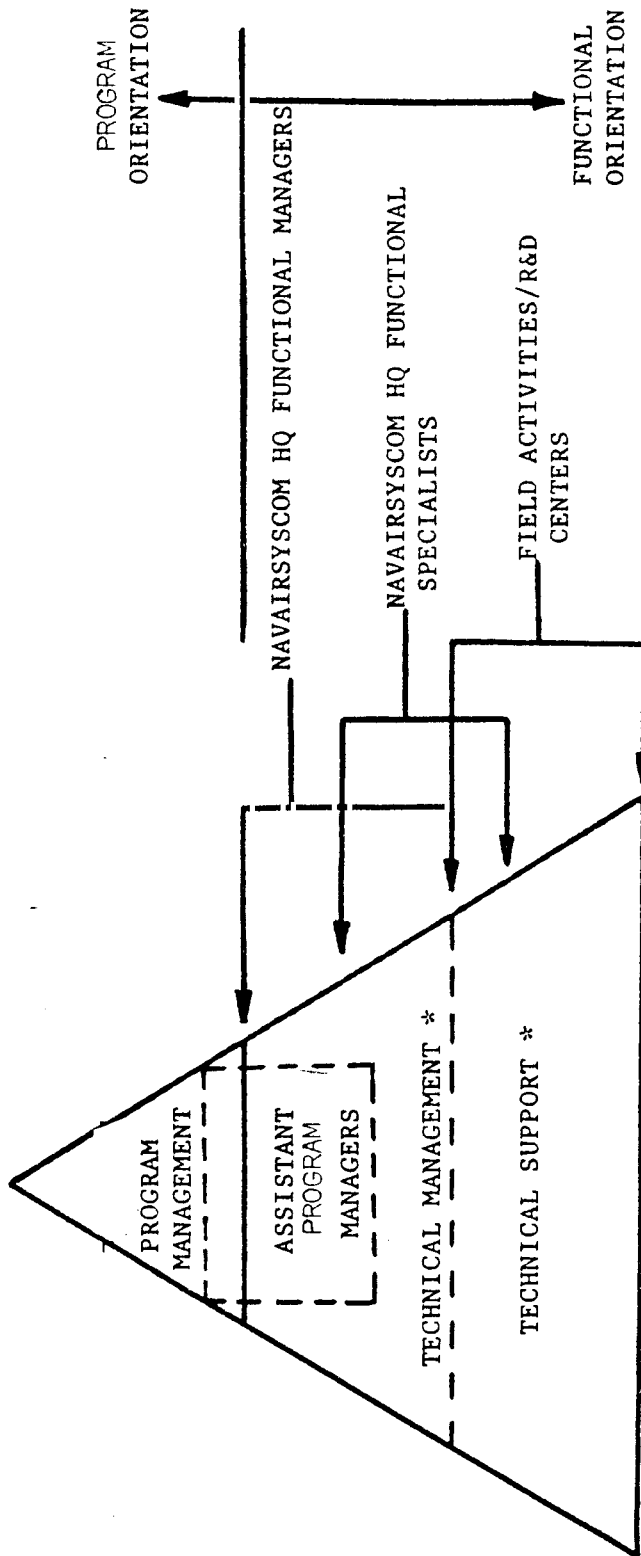


FIGURE 1. CONCEPTUAL MODEL: NAVAIRSYSCOM HQ PROGRAM/FUNCTIONAL MATRIX MANAGEMENT AND SUPPORT

\* NOTE: Technical management involves centralized policy direction and management of a technical/professional specialty area (science, engineering, procurement, logistics, etc.) which requires a high degree of specific technical expertise. Within the functional components of the matrix, the technical managers are responsible for developing the best technical solutions and sometimes coordinating technical trade-offs. Technical support involves the application of expert technical knowledge and skills in specific disciplines and specialty areas. It must be noted that this limited characterization of technical management is specifically descriptive of management roles within the NAVAIRSYSCOM HQ program/functional matrix structure.

Additionally, this conceptual model is generalized to provide a representation of the nominal program/functional matrix management relationships. No attempt has been made to reflect exceptions to the rule such as technical management activities which may have been decentralized to the field via functional transfers.

will be the Command agent responsible for overall management of all aspects of the program. Although technology demonstration programs and other similar significant technology-oriented advanced development programs are not categorized as system acquisitions, the assigned ADPO's would perform similar roles as those of the PMA/SPM/APC.

(2) The acquisition strategy and the related complementary plans (including the personnel resource plan) will define the framework for coherent integration of all of the aspects of the acquisition and support processes. Execution of this acquisition strategy generally will be effected primarily by a system prime contractor under the overall direction of the PMA/SPM/APC and the program management team, and the technical direction of the various functional (technical) managers/specialists and their technical support agents (field activities and R&D centers). However, in all cases, the PMA/SPM/APC retains the ultimate overall decision authority. The functional managers have two general sets of responsibilities

(a) developing, documenting and maintaining general standards and procedures that define how the tasks in their particular functional specialty are executed. These general standards and procedures are continuously refined as a result of technology changes and accumulated experience in the development, production and support of many weapon systems. They document the professional "corporate knowledge" of NAVAIRSYSCOM; and

(b) providing professional personnel (from the headquarters organizations, field activities/R&D centers, and/or contractors) who apply the general technical support tasks for the program managers and coordinators. Additionally, the functional managers must motivate the functional specialists within their organizational units, and the technical support activities to work in concert with all members of the program team. This program orientation is critical to program success.

(3) The functional managers exercise direct supervision over the assigned functional specialists within their organizations. The program manager is dependent upon the functional structure of the Command (functional managers/specialists and technical support activities) for support and fulfillment of the program's objectives. The program manager must insist that the functional managers exercise their assigned responsibilities.

(4) An APM will be designated within each functional group to act as the focal point for all program support efforts within that group and to coordinate the program activities of the functional specialists for the PMA in accordance with reference (a). The APM will be the principal member of the program team for the functional group's area of cognizance. The procurement contracting officer (PCO), designated within the Contracts Group (AIR-02), performs a role similar to that of the APM's. Accordingly, the PMA, the program business manager, the assigned APM's and the PCO(s) constitute the executive core of the program team. AIR-00C will designate a lawyer to provide legal services in support of the program. The functional specialists within the functional groups are responsible and responsive to the PMA through their functional managers and the appropriate APM for technical aspects of the program.

(5) Similar procedures, where appropriate, shall be applied for support of APC's, SPM's and ADPO's. When required, the application of these program/functional matrix management procedures will be tailored specifically to meet the actual needs of the program or technology base program.

b. Technical Management

(1) The designated PMA's/SPM's/APC's will execute the central executive direction and control of all program work and task areas. ADPO's will exercise similar direction and control in areas of assignment. However, technical management will be effected directly via the appropriate functional managers/specialists within the functional groups/divisions in accordance with reference (b). The cognizant APM's within the functional groups will coordinate the technical management within the groups for the PMA's/SPM's/APC's and the assistant commanders. The unique executive authority of the designated PMA/SPM/APC must be recognized by all of the functional managers and specialists. Additionally, the technical authority and stature of the functional managers and specialists must be recognized and preserved. The NAVAIRSYSCOM program/functional matrix management philosophy requires reconciliation of these potential contention-producing perspectives by the constructive employment of a responsible and accountable matrix team which is fully responsive to program needs. The PMA/SPM/APC retains ultimate responsibility and accountability, under the Commander, Naval Air Systems Command (COMNAVAIRSYSCOM) for maintaining program balance among the interplay of the three basic program elements of performance (including operational readiness), cost and schedule. However, the technical management and technical support efforts for the program must be accomplished through the utilization of the cognizant NAVAIRSYSCOM functional group/division/unit. Accordingly, the PMA/SPM/APC will assign all of the technical management and technical support tasks to the appropriate functional units within the headquarters functional groups for management and execution.

(2) The cognizant functional managers/specialists will be responsible for tasking and directing appropriate field activities and R&D centers to provide decentralized technical support, as required. It is important to note that technical performance cannot be isolated from resource implications (particularly cost and schedule). Accordingly, the functional managers and specialists will also be responsible and accountable to the PMA/SPM/APC for relevant performance, cost, and schedule interactions and impacts on the supported programs for matters under their technical authority. Similar relationships will be implemented by assigned ADPO's as appropriate. These policies pertain to all product and functional areas, for both contractor furnished equipment and government furnished equipment matters.

c. Technical Support

(1) PMA's, SPM's, APC's, ADPO's and other managers will obtain technical support for their programs from cognizant functional groups/divisions who will task the appropriate NAVAIRSYSCOM field activities and NAVMAT R&D centers, when required. The functional managers and functional specialists within NAVAIRSYSCOM HQ will develop and implement a long-term approach for maximum effective decentralization of all appropriate technical support (in some unique cases this will also include the complete set of functional management) to the appropriate NAVAIRSYSCOM field activities and NAVMAT R&D centers. This decentralization

charter as a corporate HQ. Decentralization of specific technical support efforts and/or certain functional management roles will alter the degree of the depth of involvement of the HQ organization but must not result in the ultimate abrogation of the corporate management responsibilities.

(5) The policy to discipline work assignments in accordance with reference (e) will be strictly enforced. Deviations from this methodology and tasking policy may only be granted by the cognizant functional group assistant commander (i.e. for those product and functional areas under his/her purview). The NAVAIRSYSCOM resource planning process defined by reference (g) will be utilized to monitor compliance with this work load assignment policy. The Joint Assistant Commander's Review Board (JACRB), established by reference (g), will be the principal corporate management forum for effecting management oversight.

(6) Fiscal discipline must be strictly enforced to ensure that the legal framework for the expenditure of funds is not abrogated in any way. The specific funding distinctions and implications, defined by the appropriations acts and the Comptroller of the Navy Manual, related to the utilization of RDT&E; procurement; and operations and maintenance appropriations must be maintained. For example, the legal framework for the expenditure of procurement funds dictates accountability for those funds in terms of specified major weapon systems (P-1 line items). Therefore, a direct and explicit link must exist between the technical support provided and the procurement/production of the system if any procurement accounts will be used to fund any elements of technical support.

## 5. Responsibilities

a. Assistant commanders will designate APM's to be the focal points and coordinators of all functional support (technical management and technical support) provided by their respective functional groups for the designated programs. These APM's will act as the lead system technical representatives of the PMA in their respective functional areas of cognizance. The APM will coordinate the collective activities of the functional group's program support team. The designated PCO(s) will perform a role similar to that of the APM's, as appropriate. In some cases, similar functional group coordinators will be designated for SPM's, APC's, and ADPO's. Assistant commanders will ensure that the resource plans, which are prepared in accordance with reference (g), reflect all of the work (program related and other work load) which is executed within or managed by their functional units and assigned field activities (via the designated PSO's), including all CSS. The Counsel (AIR-00C) will assign lawyers to provide legal services in support of the PMA's and associated support elements of the respective functional groups.

b. The PMA will establish an executive core group of the program management team comprised of the program business manager and appropriate APM's to provide a unified system approach with the attendant integrated and coordinated program planning and control. The primary functions of the executive core group are to promote the overall systems view throughout the Command (including the field activities/R&D centers as extensions of the matrix) and to ensure that top level system integration is effectively implemented.

c. PMA's/SPM's/APC's/ADPO's will direct the appropriate functional units to provide the required functional support for their respective programs through the appropriate APM's or group coordinators (when designated). The functional



6. Action

a. The Deputy Commander (AIR-07) will ensure that the resource planning process established by reference (g) is effectively utilized to provide a mechanism for monitoring compliance with this instruction and for providing a data base for establishing a priority preference system.

b. The Deputy Commander for Programs (AIR-01) will

(1) ensure that all NAVAIRSYSCOM PMA's/APC's are cognizant of the requirements of this instruction and comply with these provisions in the execution of their assigned programs;

(2) adjudicate major disagreements between PMA's/APC's and functional managers;

(3) establish and promulgate the relative order of priority for the designated programs in order to guide the allocation of scarce resources at NAVAIRSYSCOM HQ and field activities/R&D centers; and

(4) ensure that appropriate program funding is provided to the functional groups to support the approved programs work load.

c. Assistant commanders will

(1) ensure that all assigned SPM's, ADPO's, functional managers, and functional specialists within their functional group are cognizant of the requirements of this instruction and comply with these provisions in the execution of their programs and in their program support efforts;

(2) ensure that appropriate APM's are designated and that these APM's are assigned sufficient coordinative authority to permit them to act effectively as the principal representative of the functional group on the PMA's executive core of the program team and to orchestrate the major aspects of the functional support provided by the groups;

(3) ensure that functional managers impose discipline in work level assignments for all technical support in accordance with the requirements of this instruction and reference (e);

(4) adjudicate major disagreements between SPM's and functional managers;

(5) establish and promulgate the relative order of priority for the group's commodity area programs and other task areas which are not covered by the AIR-01 priority preference system;

(6) ensure that general standards and procedures are developed and effectively employed for each major product area and functional area; and

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(7) ensure that an adequate quantity and quality of personnel are assigned to support each APM and SPM as required to meet the program objectives (these personnel may be provided from NAVAIRSYSCOM HQ, NAVAIRSYSCOM field activities, NAVMAT R&D centers, and/or supporting contractors).

d. The Assistant Commander for Research and Technology (AIR-03) will

(1) act as the principal point of contact for coordination with MAT-05 for policy matters relating to tasking of the NAVMAT R&D centers; and

(2) assign technical assistants for technology base matters to PMA/SPM/APC program teams, when appropriate.

e. The Comptroller (AIR-08) will

(1) provide continuing financial management oversight of technical support operations to ensure that the legal framework guiding the expenditure of funds and the requirements of the applicable appropriate acts are not transgressed; and

(2) ensure that AIRTASKS/work unit assignments prepared by the functional managers are properly reflected on corresponding work requests and that these work requests, which are also prepared by the functional managers, are fiscally valid.

f. The Counsel (AIR-00C) will

(1) ensure that legal services are provided to the PMA's/SPM's APC's/ADPO's and the functional groups;

(2) provide appropriate liaison and legal support to the field activities; and

(3) coordinate dealings with external legal units in support of the NAVAIRSYSCOM acquisition mission and goals.

g. The PSO's for the NAVAIRSYSCOM field activities will

(1) work in conjunction with the field activities to ensure that these activities establish and maintain the required level of competency to effectively execute their assigned technical support roles;

(2) monitor AIRTASKS/work unit assignments generated by the work sponsors to ensure that the specific assignments to their assigned field activities are in compliance with this instruction; and

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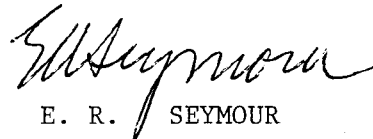
(3) work in conjunction with their assigned field activities and appropriate NAVAIRSYSCOM HQ work sponsors and staff officers to ensure that these field activities develop procedures for maintaining the necessary responsibility-authority-accountability linkages in the prosecution of assigned technical support missions.

h. Commanding officers of the field activities will

(1) ensure that the responsibility, authority and accountability relationships of the NAVAIRSYSCOM corporate framework are well defined, understood and enforced, within their field activities;

(2) in conjunction with their respective PSO's, ensure that they are in a position (considering resources, competency, facilities, etc.) to accept the accountability for the technical support programs executed at their field activities; and

(3) in conjunction with their PSO's, develop, and maintain currency of, an activity long-range master plan which is in consonance with the projected assignments outlined in reference (e). The planning horizon should be ten years for general projections and three to five years for specific plans.



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